

they would disturb the current of the main stream, and prevent the establishment of any uniform regimen for the river: Mr. Rennie, that they would have a strong tendency to interrupt the free flow of the tide. Mr. Rendel, speaking in his evidence of these recesses, observes, "I cannot imagine any arrangement which would be more likely to make the bed of the river worse than it is at present. If there were a series of long embankments, and a series of long recesses, they would, instead of giving a uniform velocity to the stream, make it more irregular than it is at present." On the other hand, Captain Beaufort was of opinion that, practically, they would have no effect on the scour of the river, and Mr. Macneil and Mr. Giles that "embankments, with occasional recesses," would conduce to its "improvement," and to the "benefit of the navigation."

The mode of levelling these recesses proposed by Mr. Walker, and of providing them with permanent foundations, is fully explained in his evidence. The objections on this head took a wider range, though intrinsically of less importance, than those above adverted to, inasmuch as they involved the use and the construction of these receptacles for trade. Of the persons in trade examined by the commission in reference to the dwarf piling proposed by Mr. Walker, Mr. Hay (a lighterman) was of opinion that it would be injurious to the craft. The answers of Messrs. Pocock and Peache (the first a coal, and the second a timber merchant) were not adverse: Mr. Lucey (a lighterman) gave no decided opinion; Mr. Taylor (a coal merchant) and Mr. Harvey (a wharfinger), both of them occupiers of extensive river frontages, were generally in favour of its adoption. The opinions of these witnesses, it is right to observe, were given in evidence, and without any previous reference to plans, sections, or other sources of information. Mr. Taylor and Mr. Harvey appear to have formed the most correct conception of the course proposed to be pursued.

Of the professional witnesses consulted, the attention of the majority appears to have been directed to the effect of this dwarf piling upon the navigation, in connection with the recesses: of those who expressed their opinions with immediate reference to the use or convenience of it to the trade, Mr. Cubitt thought that dwarf piling would be inconvenient, as forming a step or threshold under water, and Mr. Rendel, that barges would be liable to ground upon, and be endangered by it. These opinions, it should be observed, were given, not in evidence, but upon a deliberate examination of the sections which accompanied Mr. Walker's plan.

The objections of the trade to the general principle of a solid embankment, whether with or without recesses, have already been adverted to in the history of the proceedings upon Mr. Walker's plan before the select committee of 1840. Of the witnesses in trade examined by the commission, Mr. Harvey objected to a solid embankment, that it would prevent him from getting his barges to the warehouses; that he should have to carry all his goods twice; that his craft, by being exposed to the swell of the steamers, without proper moorings in the stream, would be subject to increased wear and tear; and that any measure which deprived him of his accustomed means of access would be attended with additional expense in the landing and warehousing of his goods. Mr. Pocock attached no great importance to the wear and tear apprehended by Mr. Harvey; but in every other respect concurred in his objections. It was suggested, and asserted to by these gentlemen, that piles driven out in the main stream might diminish the difficulty as to moorings, assuming the extent of these to be equivalent to the accommodations of their present frontages (in many cases usurped); but this equivalent would have involved a projection into the navigable waterway of 160 feet in the one case, and from 180 to 190 feet in the other, and, allowing for the depth of the solid embankment proposed in this particular locality (viz., in the neighbourhood of Whitefriars), would have carried the piling, on the northern shore alone, very nearly into the present centre of the river.

The opinions of the lightermen consulted on the last-mentioned of these points had reference principally to the exigencies of their

own calling. Assuming a solid embankment to be constructed throughout the whole line, they were agreed that, with the additional velocity to be given to the stream in heavy frosts, and with a channel loaded with ice, the craft would drift at the mercy of the current, and that no system of piling would avail for their security.

The professional opinions consulted by the commission were very nearly in accordance with each other on both of these points.

On that of the wharfage, Captain Beaufort, Mr. Hartley, Mr. Rendel, Mr. Macneil, and Mr. Giles were of opinion that continuous lines of solid embankment shown upon the plans could not be made consistently with the interests of the trade or the convenience of the public; Mr. Rennie, on the other hand, that the two objects were conjointly practicable; Mr. Gordon—that, "after a serious interference with, and breaking up of, existing arrangements, the trade would be ultimately great gainers by a solid embankment."

On that of the river—Mr. Hartley thought, that "to force all the craft to moor in the navigable stream would be a source of inconvenience to the trade, and of obstruction to the navigation;" Mr. Gordon,—"that" as in the present system of traffic on the Thames, the bights or bays are indispensable as places of rest and refuge, the solid embankments of plan A would tend to injure the trade;" Mr. Rendel,—"that" if the Thames were embanked with a solid embankment, according to the plan suggested, the wharfingers would find it absolutely necessary for their own protection not to moor out into the stream;" that "as the object of making a solid embankment would be to give the Thames such a uniform velocity as would keep open its channel, that velocity would prevent the use of the then shores by those barges; that the strongest run of the tide could not be taken at less than three miles an hour, and that three miles an hour would be quite enough to prevent the mooring of those craft along the shore;" that the utmost extent to which such a course would be practicable would be "a couple of barges in length;" and that guard piles carried out to an extent to meet the requisites of the trade "would not continue a week." The opinions of Captain Beaufort, Mr. Cubitt, Mr. Macneil, Mr. Rennie, and Mr. Giles were addressed rather to the question of recesses, and their convenience to the trade as shelter from the open tideway, than to the positive difficulties and disadvantages connected with solid projections.

The foregoing, we think, may be referred to as a faithful summary of the opinions whether for or against the adoption of Mr. Walker's plan, having reference exclusively to its own merits. Its relative advantages and disadvantages, with reference to other plans, will be referred to hereafter.

REFUGER HARBOUR.—In the early part of the present week, her Majesty's steamer, the *Blazer*, Captain Washington, appeared off here, taking soundings, and placing buoys with flags on them at certain points, to ascertain the capability, it is said, of our bay for the site of a harbour of refuge. On Thursday the *Blazer* went down as far as Dungeness, and yesterday morning she resumed her survey of Dover Bay. It is confidently anticipated that the present members of the Commission (who, by the way, we have heard are all to be here next week) will, like their predecessors, recommend Dover as the most eligible site for the erection of the first refuge harbour on these shores. That *sine qua non* to a harbour of refuge—commanding and efficient fortifications—are already in existence here; and the ample depth of water, its local advantages of position at the very point in the Channel to avert the dangers of the Goodwin Sands, its proximity to the Continent, and its natural defences, must point it out as a spot eminently fitted by nature as a haven of shelter from the storm, or as a defence from the assaults of hostile fleets.—*Dover Chronicle*.

INDIA-RUBBER HORSE SHOES.—A sample of an India-rubber horse-shoe has been submitted to the Horse Guards, and approved of. It is intended to test immediately its capability and durability for that purpose.

RAILWAY INTELLIGENCE.

Birmingham and Derby Junction Railway.—A special meeting was held at Birmingham on the 17th ult. to take into consideration the Bill for the amalgamation of the North Midland, Midland Counties, and Birmingham and Derby Railway Companies. Mr. Baile provided, and after stating the result of the North Midland and Midland Counties meeting, concluded by proposing the approval of the Bill, the clauses of which had been read over; and which was seconded by Sir Oswald Mosley, and adopted. Mr. Kohra, of Derby, opposed the resolution, contending that the Birmingham and Derby Company had been unfairly dealt with in the arrangement for the amalgamation of the three lines. While the traffic of the Birmingham and Derby was increasing, that of the North Midland was going on but slowly, and that of the Midland Counties scarcely at all, comparing the traffic of the present with that of the past year; while the returns of the Midland Counties were much less than ever, the Birmingham and Derby showed an increase of 16 per cent. The formation of the new lines, more particularly that from London to York, led him to take this view, and to entertain strong apprehensions on the subject. It had been assumed that the Bill for that line would not pass. He was of opinion that it would; and, if so, it would seriously affect their interests. He contended that these new lines would affect the three Companies, if united; but that it would not, if unamalgamated, affect the returns of the Birmingham and Derby, who, he thought, had been sacrificed to their more powerful rivals. He concluded by proposing an amendment for protecting the Derby Junction, in the event of the Cambridge and York line being carried out, by a reference to the Board of Trade, and to determine whether in that event better terms should not be given to the Birmingham and Derby Company. The Chairman thought that Mr. Kohra's opposition was ill-timed. He should have opposed the Bill at the special meeting lately held to consider it. He, the chairman, had no apprehension as to the Cambridge and York line, for he contended that the prospect of returns from it were such as to prevent any body of capitalists from entertaining it. If the Birmingham and Derby Company remained distinct, they would not derive that benefit which would accrue to them from the projected line from Rugby to Oxford, but would diminish one of their largest sources of income. The amendment was then put, and negatived by a majority of fifteen to three. Lieut-Col. Blane then proposed another resolution, to the effect that it was inexpedient for the proprietors to proceed further with the Bill, their interests not having been sufficiently considered. This resolution was negatived; as was also another, proposed by Mr. Kohra, to modify the clause which provides that the Chairman of the Board of Directors shall preside at general meetings.

Railroad from Lynn to Ely.—The greatest activity prevails relative to this important undertaking. Shares are being taken beyond the most sanguine expectations: indeed it is confidently believed they will soon be at a premium. During the past week a meeting was convened by the Sheriff of Norfolk, to take the line into consideration, which was attended by a large and respectable assembly.

Railway.—It is not yet fully determined at what point the terminus of the railway shall be established in Peterborough. There seems to be a general feeling that, as Butt's close cannot be obtained, a spot should be selected near the private residence of Dr. Schrimshire, kindly offered by Mr. Gates, the lessee of the property.

Railway from Stafford to Shrewsbury.—Captain Huish, Mr. Errington, and Mr. Swift, on behalf of the Grand Junction Company, attended a public meeting at Shrewsbury, on Wednesday, to explain and support the scheme for a "Shrewsbury and Stafford Railway." Resolutions in favour of the project were unanimously agreed to.

It is said that the shares in the proposed railway from Wolverhampton to Shrewsbury are all taken; and that, the funds being now subscribed, the necessary application to Parliament will be made immediately.—*Worcester Journal*.